

REMARKS

The claims are claims 1 to 20.

The application has been amended at many locations to correct minor errors and to present uniform language throughout. The amendments deletion of references to Figure 4A which was not filed with this application.

Claims 1, 4, 5, 7, 8, 10, 11, 12, 14, 15 and 16 have been amended for clarity. These amendments are believed not to change the scope of any claim.

Claims 16 to 19 were rejected under 35 U.S.C. 112, first paragraph. The Examiner ruled the specification failed to enablement requirement the claimed subject matter. Note that claims 17 to 19 were rejected without recitation of claimed subject matter not enabled in the application.

The Applicants respectfully submit that the original application properly enables the subject matter recited in claim 16. Claim 16 recites subject matter taught in the application with regard to Figure 6. The recitation "applying said digital audio filters to digital signals representative of received sound to generate third digital data" is the normal hearing aid filter function. This is taught in the application at page 8, lines 17 to 21 (Figure 3: 340) and page 14, lines 7 to 9 (Figure 6: 640). The recitation "converting said third digital data to an analog signal and providing said analog signal to a speaker in said hearing aid" corresponds to the normal digital to analog conversion and output via a speaker. This is taught in the application at page 8, lines 21 to 24 (Figure 3: 350, 360) and page 14, lines 9 to 11 (Figure 6: 650, 660). The recitation "generating fourth digital data representative of an enhanced response curve of hearing ability of sound level versus frequency" is taught in the application at page 15, line 22 to page 16, line 3. The recitations of "comparing" and

"automatically optimizing" are the same as the similar recitations in claims 1, 4 and 7. Accordingly, the Applicants respectfully submit that claims 16 to 19 are proper under 35 U.S.C. 112.

Claims 1 to 19 were rejected under 35 U.S.C. 102(a) as being anticipated by Gauthier PCT WO 90/09760.

Claims 1, 4 and 7 recite subject matter not anticipated by Gauthier. Claim 1 recites "generating digital filter coefficients controlling center frequency, filter bandwidth and amplitude for a succession of digital audio filters." Claim 4 recites "generating a set of digital filter coefficients controlling center frequency, filter bandwidth and amplitude for a succession of digital audio filters." Similarly, claim 7 recites "generating a set digital filter coefficients controlling center frequency, filter bandwidth and amplitude for a succession of compensating digital audio filters." The Applicants respectfully submit that Gauthier fails to teach digital filter coefficients that control the center frequency, amplitude and filter bandwidth of plural digital filters. Gauthier teaches a bank of filters 516 to 528 having fixed center frequency and filter bandwidth at page 17, lines 1 to 25. Gauthier teaches a corresponding variable attenuator 540 to 552 for each filter. At most Gauthier teaches digitally controlled attenuation of an analog filter bank where each filter has a fixed frequency and filter bandwidth. Accordingly, claims 1, 4 and 7 are allowable over Gauthier.

Claims 1, 4, 7, 11, 15 and 16 recite subject matter not anticipated by Gauthier. Claims 1, 4, 7, 11, 15 and 16 each recite iterative processes which generate "digital filter coefficients controlling center frequency, filter bandwidth and amplitude for a succession of digital audio filters." These claims further recite continuing iterations until a response curve is within a tolerance range or "a predetermined limit on the number of digital audio filters has been reached, whichever occurs first." This language

requires that digital filters be instantiated one at a time with no more used than required to fit the response curve within the tolerance range. Gauthier teaches at page 27, line 15 to page 8, line 1 a fixed number of filter banks that are always used. While Gauthier does teach an iterative filter definition processes, this is not based upon adding digital filters as required by claims 1, 4, 7, 11, 15 and 16. The language "until...a predetermined limit on the number of digital audio filters has been reached" would not be meaningful unless this invention adds digital filters. Accordingly, claims 1, 4, 7, 11, 15 and 16 are allowable over Gauthier.

Claims 2, 4, 5, 8 and 17 recite subject matter not anticipated by Gauthier. Claims 2, 4, 5, 8 and 17 each recite that the digital filters are second order filters. Gauthier fails to disclose any digital filter. Gauthier fails to disclose second order filters. The portion of Gauthier cited in the OFFICE ACTION as allegedly anticipating this subject matter (filters 516 to 528 of Figure 5 and page 15, lines 10 to 15) fail to teach either digital filters or second order filters. Accordingly, claims 2, 4, 5, 8 and 17 are allowable over Gauthier.

Claims 10 and 14 recite subject matter not anticipated by Gauthier. Claim 10 recites a method including "generating and providing a first series of audio digital signals to said hearing aid, each digital signal in said first series of signals corresponding to an analog audio signal having a selected frequency and multiple power levels." Claim 14 recites an apparatus including "a source of first audio digital data corresponding to analog audio signals having a selected frequency and multiple power levels." These claims recite a technique taught with respect to Figure 6 of this application where the user's hearing is tested by supplying audio digital signals to the hearing aid bypassing the microphone and analog to digital converter. Gauthier fails to

disclose supply of digital signals to the hearing aid in this testing mode. Figures 3 and 4 of Gauthier illustrate supplying analog audio signals from signal generator 320 to the hearing aid for testing the user's hearing. Accordingly, claims 10 and 14 are allowable over Gauthier.

Claim 20 has been allowed.

The Applicants respectfully submit that all the present claims are allowable for the reasons set forth above. Therefore early reconsideration and advance to issue are respectfully requested.

If the Examiner has any questions or other correspondence regarding this application, Applicants request that the Examiner contact Applicants' attorney at the below listed telephone number and address to facilitate prosecution.

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Respectfully submitted,



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